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of the head of the larva. The oral organs were normal in the number of articulations, but the antennæ were folded up, and their joints are shorter and wider than usual: the palpi are also shorter than usual, and the last joint of the maxillaries is acuminate. The eyes of the imago were concealed by the larva skin, but on raising it are distinctly seen.

June 28th.

Vice President BRIDGES in the Chair.

Forty-four members present.

The report of the Biological Department for the present month was read.

On report of the Committee of the Biological Department the paper entitled An Experimental Examination of the physiological effects of Sassy Bark, the ordeal poison of the Western Coast of Africa, by S. W. Mitchell, M. D., and Wm. A. Hammond, M. D., U. S. A., was recommended for publication in a medical Journal.

The paper entitled, Synopsis of North American Sphingidæ, by Brackenridge Clemens, M. D., was ordered to be published in the Journal of the Academy.

And the following were ordered to be printed in the Proceedings.

Description of new generic types of COTTOIDS, from the collection of the North Pacific Exploring Expedition under Com. John Rodgers.

BY THEO. GILL.

CERATOCOTTUS Gill.

Body anteriorly robust, and as broad or broader than high; thence rapidly declining to the caudal fin. Lateral line with a row of bony scutellæ. Head large, with the width greater than the height or length; profile vertical; preopercle and suborbital extended outwards and forwards; preopercle armed with a long and immoveable spine, and with two smaller ones beneath; opercle with a muricated longitudinal rib and with a rounded membranous margin; subopercle with two diverging ridges terminating in spines; postorbital ridge well developed and elevated near the nape. Branchial apertures separated by a very wide isthmus. Branchiostegal rays six. Mouth moderate, horizontal. Dorsal fins entirely disconnected; first low and declining posteriorly; second oblong and corresponding to the anal. Caudal small and posteriorly subtruncated. Pectorals with broad and oblique bases, and with obliquely rounded margins. Ventrals small, moderately approximated, behind the bases of the pectorals; each with a spinous and three simple rays.

This genus is very closely allied to the *Aspicottus* of Girard, or *Clypeocottus* of Ayres, but is easily distinguished by the form of the head, and by the absence of teeth on the anterior portion of the vomer. The latter character has been overlooked by both Cuvier and Bennett, who have both described the species on which the genus is founded, and have referred it to *Cottus*, although one of the characters which Cuvier has assigned to that genus, rested on the presence of vomerine teeth.

A single species of this genus is known; it was long since described by Pallas under the name of *Cottus diceraus*.

1859.]

BOREOCOTTUS Gill.

Body subcylindrical, rapidly declining to the caudal fin. Skin mostly naked, or with small and distant tubercles above the lateral line. Lateral line opening on the sides through small distant pores. Head large, depressed and subrhomboidal; nasal spines small; preopercle with two simple spines near the angle and two tubercles below; opercle with a longitudinal rib terminating in a spine, and with a rounded membranous margin; subopercle with a spine directed downwards. Postorbital longitudinal crests little developed. Mouth moderate. Teeth villiform, present on each jaw and on the front of the vomer. Branchiostegal membrane continuous under the throat, but attached along the middle of its length *almost* to its margin, and thus nearly restricting the branchial apertures to their respective sides. Branchiostegal rays six. Dorsals separate; the first low, highest at the middle. Ventrals small, moderately approximated and behind the pectorals; each with a spine and three soft rays.

B. axillaris Gill.—The color is purplish-blue, with whitish spots on the trunk, and with a darker band-like spot below the anterior portion of the second dorsal. The abdomen is whitish-yellow; the tail above the anal dotted, and higher up with dark spots confluent with the deep color of the sides. The first dorsal has two vertical dark bands; the second, three oblique ones. The caudal is blackish at the base and vertically banded with an undulating dark band at its posterior third. The anal has a very irregular row of spots. The pectorals are dark near the base, and have two oblique irregular bands on the posterior half, and a dark spot at their inferior axillæ.

D ix. 15.

One specimen caught with the *Porocottus quadrifilis* Gill, was obtained Behring's Straits.

Boreocottus is especially distinguished by its subrhomboidal head, simple preopercular spines, vomerine teeth and six branchial rays.

POROCOTTUS Gill.

Body anteriorly subcylindrical, rapidly declining to the caudal. Skin naked. Lateral line opening by pores in raised papillæ, under a cutaneous keel. Head large and depressed, subrhomboidal. Nasal spines small. Preopercle with a single hooked spine. Opercle without a longitudinal rib or spine. Large pores under the lower jaw and on various parts of the head. Mouth moderate. Teeth on the jaws and front of the vomer. Branchiostegal membrane continuous under the throat, but attached along the middle to the throat, almost as far as the margin. Branchiostegal rays five. Dorsals separate; the first low; the second oblong and opposite the anal. Ventrals small, behind the pectorals, each with a spine and three soft rays.

The *Porocottus* have a strong resemblance to the *Boreocottus*, but are distinguished by the naked skin, hooked preopercular spine, the absence of a longitudinal rib on the opercle, numerous pores, and the presence of only five branchiostegal rays.

P. quadrifilis Gill.—The color is purple, irregularly spotted with black. There is a dark spot under the eye, and another on the maxillary. The dorsals, caudal and pectorals are irregularly variegated with black. On the pectorals there is a dark spot at the upper axilla, and another larger one towards the middle of the base. There is a slender superciliary filament and one on each side of the nape. It is to the presence of these that the specific name is designed to draw attention.

D viii. 13.

Specimens were obtained in Behring's Straits at the same time as *Boreocottus axillaris* Gill.

[June,

Descriptions of a New Species of *CALLIANIDEA* Ed.

BY THEO. GILL.

CALLIANIDEA LÆVICAUDA Gill.

The rostrum is equilaterally triangular, obtuse, and the carapace curved outwards from its base; the carapace over the external antennæ projects abruptly, and is separated from the margin above by a short fissure; the antero-lateral margins of the carapace are abruptly extended outwards, and thence curved obliquely downwards and posteriorly.

The large cheliped is smooth and polished, and is about twice as long as the carapace. The ischium is compressed and dilated anteriorly, with the articulating surface for the meros oblique and scarcely emarginate; the meros is nearly a third longer than the ischium, subovate, flat internally, convex externally above with its inferior margin anteriorly tridenticulate and hairy; the carpus is vertical, twice as high as long, and with its posterior side internally intersecting the anterior; its posterior articulating process is about as long as broad, and is divided into two unequal parts by a wide groove on its inner side; it projects acutely below, and is there tridenticulate; the manus is oblong, three times longer than the carpus, with parallel borders: its intero-superior border is provided with a long row of hairs, and its superior surface has a few distant fascicles of hair; the inferior margin is crenulated, and there is on each side a row of fascicles of hair; the digital process of the manus is about two-thirds as long as the manus itself, and it has five tubercles at its posterior half, the anterior of which is largest; anterior to this it is crenulated, as are also the margins on each side; the dactylus is moderately curved anteriorly, and crosses the digital process of the manus, leaving a hiatus; above, it is rounded, with a row of hairs on each side, the interior of which is very dense; below, the external margin of the cochleariform excavation is anteriorly crenulated, succeeded by a moderate tubercle, and posteriorly with two large ones, the posterior of which is rather an elevated apophysis; the internal border is anteriorly crenulated; a few pits with fascicles of hair are between the ridges of the cochleariform excavation and on each side.

The first pair of maxillipeds are smooth and polished on their external surfaces, and their internal margins are ciliated with long hairs. On the internal surface of the ischium there is a longitudinal, distinctly pectiniform ridge; the meros, carpus and manus have each a longitudinal row of hairs on their inner surface. The ischium is very slightly curved, and its margins are nearly parallel. The meros is shorter, with an oblique tooth internally on its anterior third, and thence more slender. The carpus is slender at its base, and internally very convex at its anterior half. The manus is narrowed from near the base to its termination. The dactylus is widest at the middle, and anteriorly rounded.

The exognath of the outer maxilliped extends beyond the middle of the meros.

The outer antennæ are about half as long as the internal, and the penultimate joint is the longest.

The median lamina of the caudal fin is rounded at the end, and its margin is not ciliated. The lateral laminae increase progressively but little in length, and each one bears a ridge which is continued almost to the margin.

The feet of the second pair are provided with long hairs on their internal borders. The feet of the fourth pair are nearly as much compressed as the anterior, and the basilar article is much enlarged.

This species agrees very closely with the description of the *Callianidea typa* of Milne Edwards, (*Hist. Nat. des Crustacés*, vol. ii. p. 320) but on a comparison with the figures it appears to differ in the form of some of the joints of the 1859.]

maxilliped, and in the presence of a tooth on the inner margin of the meros, as well as by the entire and plain margin of the median caudal lamina. Other differences seem to exist, which a comparison of the species would probably substantiate. The two species are also inhabitants of very distinct zoological regions, the *Callianidea typa* being a native of the shores of New Ireland, while the *Clævicauda* was obtained under rocks, within coral reefs, at the Island of Barbados, in the West Indies. The size of the two species is nearly similar.

Description of a new genus of *SALARIANÆ*, from the West Indies.

BY THEO. GILL.

ENTOMACRODUS Gill.

Body naked, elongated and slender, slowly declining to the caudal. Head obliquely compressed, oblong subquadrate, and with the profile vertical. Opercula unarmed. Eyes lateral, closely approximated, situated at the angle of the profile with the postocular region. No superciliary or nasal tentacles or appendages. Branchial apertures continuous under the throat. Branchial membrane free and dilatable. Branchiostegal rays six. Mouth moderate, with the contour of the upper jaw semicircular; upper jaw protruding beyond the lower. Lips moderate, uniform and free, concealing the teeth. Teeth labial and movable, very slender and recurved, contiguous and uniserial. Lower jaw with an interior very large and recurved tooth on each side, which is received into a corresponding fossette of the palate. Dorsal fins disconnected, nearly equal to each other in length; the posterior free from the caudal. Anal equalling or exceeding the second dorsal. Caudal with its posterior margin obtusely rounded. Pectorals moderate, angularly rounded. Ventrals approximated, each with three simple rays, the internal of which is smallest.

On a comparison with a true species of *Salarias*, this genus is found to differ in its more elongated form, by the separate dorsals, and by the absence of any superciliary appendages. The canine teeth of the lower jaw are greatly developed, but they are found of nearly equal size in several species that have been referred to the genus *Salarias*. One of the species so distinguished is an inhabitant of the West Indian seas, and has been described under the name of *Salarias atlanticus*, by Cuvier and Valenciennes, in the *Histoire Naturelle des Poissons*. That species has an oblong body, superciliary appendages, and the dorsals connected at the base, and is therefore a true *Salarias*.

E. nigricans Gill. The elongated body, from the snout to the end of the caudal fin, is between seven and eight times longer than it is high at the pectorals; its height at the caudal is about a thirteenth of the same length.

The head is subquadrate, and forms two-ninths of the total length. Its greatest height equals two-thirds of its length. Its sides decline obliquely outwards and downwards.

The first dorsal commences near the nape, and two of its rays are in advance of the pectorals. The second dorsal commences immediately behind the first, and nearly over the fourth ray of the anal; it ceases some distance from the base of the caudal. The anal is more uniform in height than the dorsal, and ceases before it does. The caudal forms less than a fifth of the total length.

D 11, 15; A 17; P 15; V 3.

The general color of the body and fins is blackish.

A single specimen was caught in shallow water, at the island of Barbados, near Bridgetown.

[June,

HERPETOLOGICAL NOTICES.

BY CHARLES GIRARD, M. D.

I. *BUFO LAMENTOR*.—Upper surface of head nearly plane; skin thick, not adhering to the skull. Snout prominent. Parotids small, elongated. Tympanum small and subcircular. Tongue lanceolated, very free posteriorly where broadest. Upper jaw slightly emarginated. Limbs well developed, of stout appearance. First finger nearly as long as the third. Palm of hands tubercular. Two carpal disks. A membranous fold along the inner edge of the tarsus. Toes webbed to near their tips. Two moderately developed metatarsal tubercles. Sole of feet tubercular. Skin above glandulous; beneath warty. Color greenish brown, maculated with black above and beneath.

The head is broad and depressed; its length entering three times in that of the body, hence constituting the fourth of the entire length. Its upper surface is even, that is to say it exhibits neither crests nor grooves; the skin not adhering to the skull. The snout is rather prominent. The interocular space is wider than the eyelid. The nostrils are equidistant between the anterior rim of the orbit and the notch of the upper jaw. The tympanum is small and subcircular; its horizontal diameter being half that of the eye. The parotid glands are small, elongated, subovate; they are perforated by very small and distant pores, whilst their surface is either smooth or minutely granular.

The snout is large and the upper jaw but slightly emarginated; the tongue being elongated, subelliptical, and free upon the half or even two-thirds of its length. The inner nostrils are quite large and transversely elongated. The openings of the eustachian tubes are nearly equal in size to the inner nostrils.

The limbs are stout and very much developed; the anterior ones, when stretched backwards, extend beyond the groins, and the posterior ones when extended forwards project the extremity of three toes beyond the snout. Both fingers and toes, are depressed, whilst the tubercles under the articulations of the phalanges are rather conspicuous; the palm of the hands and the sole of the feet being coarsely granular. There are two carpal disks; the middle one is very large, whilst that at the base of the inner finger is but slightly larger than the subarticular knobs, in the young, proportionally much larger in the adult. The metatarsal tubercles are subconical; the innermost being somewhat larger than the others. The toes are palmated to near their tips, but the interdigital membrane is deeply and broadly emarginated.

Large glandular warts are spread irregularly over the head, body and limbs, more conspicuously over the back, and especially over the thighs. The intervening space exhibits miliary granules hardly perceptible to the unarmed eye. The inferior surface is wrinkled in various ways, spread over with granular warts and minute granules.

The ground color is greenish brown, somewhat lighter or whitish beneath, maculated with black all over the head, body and limbs, above as well as below. On the upper surface, the black patches generally surround the glandular warts, whilst on the sides they assume a meandering aspect. An exiguous dorsal light streak or filet is generally observed from the snout to the coccyx, although sometimes obliterated in whole or in part.

Specimens of this species were collected about Fort Bridger, Utah Territory, by Mr. Drexler, according to whom they are very common.

II. *ENGYSTOMA TEXENSE*.—Head constituting the third of the total length. Snout forming an acute triangle rounded at the summit. Gape of the mouth horizontal, its cleft extending to a perpendicular line drawn posteriorly to the pupil. Limbs slender; three carpal callosities, and one metatarsal tubercle. Palm of hands and sole of feet smooth. Skin smooth also. Color above light olivaceous brown, with a few black dots posteriorly; beneath uniform whitish.

1859.]

This species is allied to *E. carolinense*, and differs from it by a more depressed and flattened head, a more truncated snout which, as usual, protrudes beyond the lower jaw. The body itself is likewise more depressed, and the limbs assume a slender appearance.

The head is continuous with the body, and constitutes about the third of their combined length. The cleft of the mouth does not extend as far back as in *E. carolinense*, since it corresponds to a perpendicular line drawn behind the pupil. The longitudinal diameter of the eye is equal to the distance between the orbit and the nostril. The interocular space, measured across the anterior rim of the orbits, is greater than the rostral space from the orbits forwards. The symphysis of the lower jaw presents the same structure as in the species just alluded to.

The skin is perfectly smooth throughout in all the specimens which we have examined; they were collected in April, and are, no doubt, liable to assume a rougher appearance during the hotter and more dry season of the year.

The ground color of the upper region of the head, body and limbs, is of a light olivaceous brown tint, anteriorly uniform, posteriorly besprinkled with small black spots or dots especially over the coccyx and thighs. A whitish tint pervades uniformly throughout the inferior regions.

Specimens of this species were procured in Texas, by Capt. John Pope.

Descriptions of Twelve New Species of UNIONES, from Georgia.

BY ISAAC LEA.

UNIO BALDWINENSIS.—Testâ oblongâ, compressâ, ad latere planulatâ, inequilaterali, posticè biangulatâ; valvulis subcrassis, anticè paulisper crassioribus; natibus prominulis; epidermide vel luteolâ vel fuscâ, eradiatâ; dentibus cardinalibus parvisculis, subcompressis, subelevatis, crenulatis, in utroque valvulo subduplicibus; lateralibus prælongis lamellatis subrectisque; margaritâ vel albâ vel salmonis colore tinctâ et valdè iridescente.

Hab.—Carter's Creek, Baldwin Co., Georgia. J. Postell.

UNIO VIRIDANS.—Testâ lævi, oblongâ, compressâ, ad latere planulatâ, posticè biangulata, anticè rotundatâ, valdè inequilaterali; valvulis subtenuibus; natibus prominulis, ad apices undulatis; epidermide fusco-viridi, striatâ, obsoletè radiatâ; dentibus cardinalibus parvis, striatis, crenulatis; lateralibus prælongis, lamellatis subrectisque; margaritâ vel albâ vel salmonia, sæpè purpureâ et valdè iridescente.

Hab.—Near Columbus, Georgia. G. Hallenbeck.

UNIO HALLENBECKII.—Testâ lævi, suboblongâ, compressâ, ad latere planulatâ, valdè inæquilaterali, posticè subbiangulari, anticè obliquè rotundata; valvulis subcrassis; natibus prominulis, ad apices crebrè et concentricè undulatis; epidermide rufo-fuscâ, micante, obsoletè radiatâ; dentibus cardinalibus subgrandibus, compressis, erectis, crenulatis, in utroque valvulo duplicibus; lateralibus longis, crassis rectisque; margaritâ vel purpureâ vel salmonis colore tinctâ et valdè iridescente.

Hab.—Flat Rock Creek, and Four Mile Creek, near Columbus, Georgia. G. Hallenbeck, and Bishop Elliott.

UNIO SALEBROSUS.—Testâ lævi, oblongâ, subcompressâ, ad latere planulatâ, posticè biangulatâ, anticè subtruncatâ, valdè inæquilaterali; valvulis subcrassis, anticè paulisper crassioribus; natibus subprominentibus, ad apices crebrè et concentricè undulatis; epidermide vel rufo-fuscâ vel luteo-fuscâ et valdè striatâ; dentibus cardinalibus subgrandibus, striatis, subelevatis crenulatisque; lateralibus prælongis subcurvisque; margaritâ vel albâ vel salmoniâ, rarè purpureâ et iridescente.

[June,

Hab.—Flat Rock Creek and Bull Creek, Georgia, G. Hallenbeck; and Chattahoochee River, near Columbus, Georgia. Bishop Elliott.

UNIO MODICELLUS.—Testâ lævi, subobliquâ, inflatâ, posticè subbiangulatâ, inæquilateralî; valvulis subcrassis, anticè crassioribus natibus prominentibus; epidermide vel luteâ vel luteo-olivâ, obsoletè radiatâ; dentibus cardinalibus parvis, compresso-conicis, crenulatis, in utroque valvulo duplicibus; lateralibus curtis, crassis, subrectisque; margaritâ albâ, posticè aureâ et iridescente.

Hab.—Connasauga River. Bishop Elliott, and Chattanooga River, Georgia. T. Stewardson, M. D.

UNIO LATUS.—Testâ lævi, transversâ compressâ, posticè obtusè angulatâ, valdè inæquilateralî; valvulis subtenuibus; natibus prominulis; epidermide luteolâ vel luteo-fuscâ, micante et perradiatâ; dentibus cardinalibus parvis, subcompressis, striatis; lateralibus prælongis, lamellatis subrectisque; margaritâ vel albâ vel purpurascente vel salmonis colore tinctâ et valdè iridescente.

Hab.—Savannah River, near Savannah, Georgia. Rev. G. White and Major Le Conte.

UNIO VERUTUS.—Testâ lævi, transversâ, subinflatâ, ad latere planulatâ, posticè obtusè angulatâ, anticè rotundatâ et valdè inæquilateralî; valvulis crassiusculis, anticè paulisper crassioribus; natibus prominulis, ad apices crebrè undulatis; epidermide rufo-fuscâ, radiatâ vel eradiatâ; dentibus cardinalibus subgrandibus, compressis subelevatis, striatis, in utroque valvulo duplicibus; lateralibus prælongis, lamellatis, subcrassis subcurvisque; margaritâ vel albâ vel salmoniâ vel purpurascente et valdè iridescente.

Hab.—Flat Rock Creek, near Columbus, Georgia. G. Hallenbeck.

UNIO JOHANNIS.—Testâ obliquo-ellipticâ, subinflatâ, posticè obtusè angulatâ, valdè inæquilateralî; valvulis subcrassis, anticè crassioribus; natibus subelevatis; epidermide tenebroso-viridi, ad umbones micante, posticè luteâ; dentibus cardinalibus subcrassis, compressis, suberectis; lateralibus curtis, rectis, subcrassis corrugatisque; margaritâ albâ et valdè iridescente.

Hab.—Connasauga River. Bishop Elliott; and Etowah River, Georgia. Rev. G. White. Alabama River. Dr. Budd.

UNIO RAEËNSIS.—Testâ lævi, oblongâ, subinflatâ, ad latere subimpressâ, posticè tumidâ et biangulatâ, valdè inæquilateralî, ad basim emarginatâ; valvulis subcrassis; natibus prominulis; epidermide rufo-fuscâ, substriatâ, obsoletè radiatâ; dentibus cardinalibus parvis, valdè crenulatis; lateralibus prælongis curvisque; margaritâ purpureâ et iridescente.

Hab.—Chattahoochee, near Columbus, and Rae's Creek, Georgia. Bishop Elliott.

UNIO INUSITATIS.—Testâ lævi, oblongâ, subcompressâ, ad latere planulatâ et contractâ, posticè obtusè biangulatâ, valdè inæquilateralî; valvulis crassiusculis; natibus prominulis, ad apices minutè undulatâ; epidermide luteâ et fuscâ, supernè glabrâ, infernè tenebroso-striatâ, obsoletè radiatâ; dentibus cardinalibus parvis, acuminate, crenulatis, in utroque valvulo duplicibus; lateralibus longis, lamellatis subrectisque; margaritâ vel albâ vel purpureâ vel salmonis colore tinctâ et valdè iridescente.

Hab.—Swift Creek, below Macon, Georgia. Bishop Elliott.

UNIO JONESII.—Testâ lævi, ellipticâ, subinflatâ, valdè inæquilateralî, posticè obtusè angulatâ; valvulis subtenuibus, anticè crassioribus; natibus prominulis, ad apices undulatis; epidermide luteâ, radiis interruptis; dentibus cardinalibus parvisculis, erectis, conicis; lateralibus sublongis, lamellatis rectisque; margaritâ vel albâ vel salmonis colore tinctâ et valdè iridescente.

Hab.—Uharlee Creek, Georgia. J. Postell.

1859.]

UNIO QUADRATUS.—Testâ lævi, quadratâ, compressâ, ad latere planulatâ, inæquilaterali, posticè obtusè biangulatâ; valvulis subcrassis; natibus promi-nulis; epidermide vel rufo-fuscâ vel tenebroso-fuscâ et obsoletè radiatâ; denti-bus cardinalibus subcrassis, compresso-conicis, crenulatis, in utroque valvulo duplicibus; lateralibus longis, lamellatis, erassis curvisque; margaritâ vel albâ vel purpurascente et iridescente.

Hab.—Carter's Creek. J. Postell; and Factory Creek, Georgia. G. Hal-lenbeck.

Catalogue of Birds collected on the Rivers Camma and Ogobai, Western Africa, by Mr. P. B. Duhaillu, in 1858, with notes and descriptions of new species.

BY JOHN CASSIN.

[Concluded.]

197. *NUMIDA PLUMIFERA*, Cassin.

Numida plumifera, Cassin, Proc. Acad. Philada. 1856, p. 321.

Journ. Acad. Philada. iv. pl. 2.

Specimens of both sexes in the present collection have the head quite naked, and appear to be in older plumage, than those described by me and figured as above. They do not differ, however, in any important character. From the Ogobai and Rembo.

198. *PHASIDUS NIGER*, Cassin.

Phasidus niger, Cassin, Proc. Acad. Philada. 1856, p. 322.

Journ. Acad. Philada. iv. pl. 3.

Specimens quite similar to that described by me, and figured as above. From the Camma and Ogobai.

199. *FRANCOLINUS SQUAMATUS*, Cassin.

Francolinus squamatus, Cassin, Proc. Acad. Philada. 1856, p. 321.

The only species of this genus received in Mr. Duhaillu's collections. From the Ogobai, and formerly from the Moonda and Cape Lopez.

Related to *F. ahantensis*, Schlegel, Beydr. Dierk. pl. 14, but distinct.

200. *PELIPERDIX LATHAMI*, (Hartlaub).

Francolinus Lathamii, Hartl. Cab. Jour. 1855, p. 210.

Francolinus Peli, Schlegel, Beydr. Dierk. i, p. 50, pl. 15.

Numerous specimens of this little known and handsome bird are from the Camma and Ogobai. This is a very changeable species in its specific characters, especially in the markings of the under parts and the shade of color of the upper, and I am not quite sure that there are not two species in the present collection. The most obvious variation is in the size of the white circular and cordate spots on the under part of the body;—usually these are small and terminal, but specimens occur, of both sexes, in which they are large, and enclose a spot of black.

Prof. Schlegel's beautiful plate of this bird, cited above, represents it as lighter colored on the upper parts than is usual in the collections of Mr. Duhaillu.

201. *SYNOICUS ADANSONII*, (Verreaux).

Coturnix Adansonii, Ver. Rev. et Mag. Zool. 1851, p. 515.

One specimen only of this little species from the Ogobai, which is a female, but readily identified from M. Verreaux's types in the Acad. Mus. This handsome little bird is strongly allied to the other species of the genus *Synoi-cus*, Gould, and resembles several of them in general appearance.

202. *OEDICNEMUS SENEGALENSIS*, Swainson.

Oedicnemus senegalensis, Swains. B. of W. Afr. ii. p. 128, (1837).

[June,

Numerous specimens from the Camma and Ogobai, and previously received in Mr. Duhaillu's collections.

203. *GLAREOLA CINEREA*, Fraser.

Glareola cinerea, Fraser, Proc. Zool. Soc. London, 1843, p. 26.

Gray, Gen. iii. pl. 144.

From the Camma, and the only specimens received from Mr. Duhaillu. Evidently a peculiar and strongly marked species. In the specimens now before me the reddish collar on the back of the neck is narrower, and more strongly defined than as represented in Mr. Gray's very handsome plate, cited above. This bird belongs to the same group as the Asiatic *G. lactea*, Temm., which has been named by the Prince Bonaparte, *Galachrysis*.

204. *LOBIVANELLUS ALBICEPS*, (Gould).

Vanellus albiceps, Gould, Proc. Zool. Soc. London, 1834, p. 45.

Fraser, Zool. Typ. Birds, pl. 64.

From the Camma.

205. *ARGIALITES PECUARIUS*, (Temminck).

Charadrius pecuarius, Temm. Pl. Col. v. pl. 183.

From the Camma.

206. *ARGIALITES MARGINATUS*, (Vieillot).

Charadrius marginatus, Vieill. Nouv. Dict. xvii. p. 138.

From the Camma. Scarcely in mature plumage, and not to be identified without exertion, but apparently this species, judging from the description by Dr. Hartlaub, Orn. W. Afr. p. 216, and the original as cited above.

207. *ARDEA GOLIATH*, Temminck.

Ardea goliath, Temm. Pl. Col. 474. Rüpp. Atlas pl. 26.

A single specimen of this gigantic Heron is labelled as having been obtained on the Camma. In adult plumage, and presenting no characters other than as described and figured as above.

208. *EGRETTA FLAVIROSTRIS*, (Wagler).

Ardea flavirostris, Wagler, Syn. Av.

From the Camma. Numerous specimens which appear to be this species.

209. *EGRETTA BUBULCUS*, (Savigny).

Ardea bubulcus. Savigny.

From the Camma.

210. *BUTORIDES ATRICAPILLA*, (Afzel).

Ardea atricapilla, Afzel.

Egretta thalassina, Swains. An. Menag. p. 333.

From the Camma.

211. *CICONIA LEUCOCEPHALA*, Gmelin.

Ciconia leucocephala, Gm. Syst. Nat. i. p.

Ciconia umbellata, Wagler, Syst. Av.

Buff. Pl. Enl. 906. Gray Gen. iii. pl. 151.

Numerous specimens from the Camma.

212. *MYCTERIA SENEGALENSIS*, Shaw.

Mycteria senegalensis, Shaw.

Ciconia ephippiorhyncha, Temm. Pl. Col. 64.

Vieill. Gal. pl. 255. Rüpp. Atl. pl. 3.

Several specimens from the Camma.

213. *LEPTOPTILOS CRUMENIFERA*, (Lesson).

"*Ciconia crumenifera*, Cuvier." Lesson, Traite, i. p. 585, (1831).

Ciconia argala, Temm. Pl. Col. 301.

From the Camma.

1859.]

214. *SCOPUS UMBRETTA*, Gmelin.
Scopus umbretta. Gm. Syst. Nat. i. p. 618.
 Buff. Pl. Enl. 796.
 From the Camma and formerly from the Muni.
215. *TANTALUS IBIS*, Linnæus.
Tantalus ibis, Linn. Syst. Nat. i. p. 241.
Tantalus rhodinopterus, Wagler, Syst. Av.
 Buff. Pl. Enl. 389.
 From the Camma.
216. *GERONTICUS HAGEDASH*, (Latham.)
Tantalus hagedash, Lath. Ind. Orn. ii. p. 709.
Tantalus caffrensis, Licht.
 Vieill. Gæl. ii. pl. 246.
 Numerous specimens from the Camma.
217. *GERONTICUS OLIVACEUS*, (Du Bus.)
Ibis olivacea, Du Bus. Bull. Acad. Brussels, 1837, p. 103.
 Du Bus. Esqu. Orn. i. pl. 3.
 Several specimens from the Camma and formerly from the Moonda. The adult of this handsome species is described and figured very accurately by the Baron Du Bus, as above cited.
 Young ♂. General colors as in the adult, but paler. Under parts of the body with large oval spots of dull yellowish.
218. *THRESCIORNIS RELIGIOSUS*, (Savigny).
Ibis religiosa, Savigny, Hist. Nat. d'Egypt.
Tantalus aethiopicus, Lath. Ind. Orn. ii. p. 706.
Numenius ibis, Cuvier, Ann. du Mus. iv. p. 116, pl. 53.
 Numerous specimens precisely similar, so far as I can see, to others in the Acad. Mus. from Eastern and North Eastern Africa. From the Camma.
219. *NUMENIUS PHAEOPUS*, (Linnæus).
Scolopax phaeopus, Linn., Syst. Nat. i. p. 243.
 Gould, B. of Eur. iv. pl. 303.
 From the Camma.
220. *ACTITIS HYPOLEUCUS*, (Linnæus).
Tringa hypoleucos, Linn. Syst. Nat. i. p. 250.
 Gould, B. of Eur. iv. pl. 316.
 From the Camma.
221. *PARRA AFRICANA*, Gmelin.
Parra africana, Gm. Syst. Nat. i. p.
 Sw. Zool. III. pl. 43. Lath. Gm. Hist. ix. pl.
 Numerous specimens from the Camma.
 Young ♂. Head above and neck behind dark brown, upper parts of body dull rufous, under parts white. Breast tinged with dull yellow, sides and flanks dark chestnut, superciliary line dull ochre yellow.
222. *RALLUS OCULEUS*, (Temminck).
Gallinula oculatea, Temm.
 Adult and young from the Camma.
 Young ♂. Entire plumage dark brown with a reddish tinge on the under parts of the body. Quills black, with large spots of white, by which the species can easily be recognized.
223. *HIMANTORNIS HAEMATOPUS*, Hartlaub.
 "Himantornis haematopus, Temm." Hartl. Cab. Jour. iii. p. 357.
 Two specimens only from the Camma.

[June,

224. **PORPHYRIO ALLENI**, Thomson.
 Porphyrio Alleni, Thoms. Ann. and Mag. Nat. Hist. 1842, p. 204.
 Gray, Gen. iii. pl. 162.
 Numerous specimens from the Camma. Gray's beautiful plate above cited represents the adult of the size of life.
 Young ♂. Upper parts dull greenish brown, feathers edged with dull yellowish, under parts dull yellowish white. Inferior wing coverts bluish, bill yellowish brown.
225. **LIMNOCORAX FLAVIROSTRIS**, (Swainson).
 Rallus flavirostris, Swains.
 Numerous specimens from the Camma.
226. **PHOENICOPTERUS ERYTHRÆUS**, Verreaux.
 Phoenicopterus erythraeus, Verr. Rev. et Mag. 1855, p. 221.
 One specimen only, which appears to be a young bird of this species.
 From the Camma.
227. **NETTAPUS MADAGASCARIENSIS**, (Gmelin).
 Anas madagascariensis, Gm. Syst. Nat. i. p. 522.
 Anas aurita, Boddaert.
 Buff. Pl. Enl. 770.
 Specimens of both sexes, not to be distinguished from others in Acad. Mus. from Eastern Africa. From the Camma.
228. **DENDROCYGNA VIDUATA**, (Linnæus).
 Anas viduata, Linn. Syst. Nat. i. p. 205.
 Numerous specimens from the Camma and Ogobai.
229. **QUERQUEDULA HARTLAUBII**, nobis.
 Querquedula cyanoptera, Hartl.
 "Anas cyanoptera, Temm. Mus. Lugd."
- The name by which this handsome species is given in Dr. Hartlaub's Ornithology of Western Africa, adopted from that of Temminck in the Leyden Museum, was long since anticipated by Vieillot in Nouv. Dict. v. p. 104. The species too, described by Vieillot as *Anas cyanoptera*, is a *Querquedula*, and the same as described and figured by me in Birds of California and Texas i. p. 82, pl. 15, and now well known as a bird of the Western regions of North America. I take the liberty, therefore, of applying to this bird the name of its first describer, in which I hope to be sustained by naturalists, not only for reasons above mentioned, but as an act of justice to one who has contributed in the most important manner to Western African Ornithology.
- This handsome bird is evidently an abundant species on the Camma and Ogobai. The sexes are very nearly alike.
230. **PODICA SENEGALENSIS**, (Vieillot).
 Heliornis senegalensis, Vieill. Nouv. Dict. xiv. p. 277.
 Gray, Gen. iii. pl. 172.
 From the Camma.
231. **STERNA CASPIA**, Pallas.
 Sterna caspia, Pallas, Trans. Acad. St. Petersburg.
 Gould, B. of Eur. pl. 414. Naumann, B. of Germ. pl. 248.
 From the Camma.
232. **STERNA CANTIACA**, Gmelin.
 Sterna cantiaica, Gm. Syst. Nat. ii. p. 606.
 Gould, B. of Eur. pl. 415. Naumann, B. of Germ. pl. 250.
 From the Camma.

233. STERNA SENEGALENSIS, Swainson.

Sterna senegalensis, Swains. B. of W. Afr. ii. p. 250.

Nearly allied to the European *S. Hirundo*. From the Camma.

234. STERNA.

Several specimens of young birds impossible to identify, but apparently of one species only. Probably the young of a dark colored species.

235. RHYNCHOPS ORIENTALIS, Rüppell.

Rhynchops orientalis, Rüpp. Atlas, Birds p. 37, pl. 24.

Numerous specimens labelled as having been obtained on the Camma.

236. PLOTUS LEVAILLANTII, Temminck.

Plotus Levallantii, Temm.

Plotus congensis, Cranch.

Buff. Pl. Enl. 107. Temm. Pl. Col. 380.

From the Camma. Precisely similar to specimens from Eastern and Southern Africa in the Academy Museum.

237. SULA CAPENSIS, Lichtenstein.

"*Sula capensis*, Licht." Bonap. Consp. Av. ii. p. 165.

"*Sula melanura*, Temm." Bonap. as above.

Easily to be distinguished from *S. bassana* by its black tail. Numerous specimens of adults and young from the Camma.

238. CARBO AFRICANUS, (Gmelin).

Pelecanus africanus, Gm. Syst. Nat. i. p. 177.

Carbo longicauda, Swains. B. of W. Afr. ii. p. 255, pl. 31.

One specimen only from the Camma.

With this species I conclude the catalogue of the present highly interesting collection.

An election for Librarian was held, and Dr. Jas. C. Fisher was duly elected.

[June,



1. MELIGNOTHES EXILIS. CASSIN .

2. HETAERODES INSIGNIS. CASSIN .



MELIGNOTHES CONIROSTRIS. CASSIN

Otto Kochler del.

Lith. et col. Bowen & Co Philada.